

December 15, 2005

Elan Hazer
Ethan Construction
3100 Airport Way S.
Seattle, WA 98134

1311/15-10



RE: Asbestos & Other Fiber Analysis: NVL Batch # 2517977

Dear Mr. Hazer,

Enclosed please find test results for the air samples submitted to our laboratory for analysis. Examination of these samples was conducted in accordance with the NIOSH 7400 method. Results are reported in fibers per cubic centimeter (fibers/cc) and in fibers per square millimeter (fibers/mm²). The working range for the NIOSH 7400 method is between 100 and 1300 fibers per square millimeter. Results are not blank corrected unless field blanks provided.



Lab Code #: 102063



AIHA - IH
Lab Code #: 101861

Washington State Department of Labor and Industries requires that an employer provide airborne asbestos concentrations less than 0.1 fibers per cubic centimeter of air as an average for eight hours, and less than 1.0 fibers per cubic centimeter of air over a sampling period of thirty minutes to the employees (WAC 296-62-07705). For recent regulation updates please call the regulatory agencies.

Washington State Department of Labor and Industries also requires that post-abatement (clearance) area samples must not exceed the pre-abatement fiber concentration or 0.1 fibers per cubic centimeter whichever is lower (WAC 296-62-07709).

The EPA definition of clean air is less than 0.01 fibers per cubic centimeter.

Inter and intra-laboratory relative standard deviations can be made available upon request.

We are pleased to have been of service and hope to work with you again. If you should have any questions regarding the NIOSH 7400 method or the results please feel free to call.

Sincerely,

Nick Ly, Technical Director

Enc.: Sample results

NVL LABORATORIES, INC
4700 AURORA AVE N
SEATTLE, WA 98103.6516
TEL 206.547.0100
FAX 206.634.1936
nvlabs@nvlabs.com

www.nvlabs.com
1.888.NVL.LABS (685.5227)

RCLLC 0002156

NVL Laboratories, Inc.

4708 Aurora Ave. N., Seattle, WA 98103
Tel: 206.547.0100, Fax: 206.634.1936
www.nvllabs.com

AIHA - IH
#101861

**Asbestos And Other Fibers Analysis**

by Phase Contrast Microscopy

Client: Ethan Construction
Address: 3100 Airport Way S.
Seattle, WA 98134

Attention: Mr. Elan Hazer

Project Location: Bldg 10 2nd FL 3100 Airport Way S. Seattle WA 98134

Batch #: 2517977.00

Method: NIOSH 7400

Client Project #: N/A

Samples Received: 5

Samples Analyzed: 5

Lab ID: 25107129

Client's Sample #: EC-1

Date sampled: 12/12/2005

Time	Flow Rate
Start 04:00 AM	15.00
End 04:30 AM	15.00
Minutes 30	Ave. 15.00

Sample type: Pre Abatement

Location: Bldg 10 2nd FL 3100 Airport Way S. Seattle WA 98134

Activity: Pre abatement

Worker:

Comments:

Liters Pump ID
450

LOQ fibers/cc
min 0.086 max 1.112

Fibers/flds
100 / 98

Fibers/mm²
130.0

RL f/cc
0.006

Fibers/cc
0.111

Lab ID: 25107130

Client's Sample #: EC-2

Date sampled: 12/12/2005

Time	Flow Rate
Start 04:30 AM	10.00
End 10:30 AM	10.00
Minutes 360	Ave. 10.00

Sample type: AREA

Location: Bldg 10 2nd FL 3100 Airport Way S. Seattle WA 98134

Activity: Removal

Worker:

Comments:

Liters Pump ID
3600

LOQ fibers/cc
min 0.011 max 0.139

Fibers/flds
0 / 100

Fibers/mm²
<7.0

RL f/cc
<0.001

Fibers/cc
<0.001

Lab ID: 25107131

Client's Sample #: EC-3

Date sampled: 12/12/2005

Time	Flow Rate
Start 04:30 AM	2.00
End 05:00 AM	2.00
Minutes 30	Ave. 2.00

Sample type: Ceiling

Location: Bldg 10 2nd FL 3100 Airport Way S. Seattle WA 98134

Activity: Removal

Worker: Melanie Blea

514805335

2003019950A

Comments:

Liters Pump ID
60

LOQ fibers/cc
min 0.642 max 8.342

Fibers/flds
0 / 100

Fibers/mm²
<7.0

RL f/cc
0.045

Fibers/cc
<0.045

Lab ID: 25107132

Client's Sample #: EC-4

Date sampled: 12/12/2005

Time	Flow Rate
Start 05:00 AM	1.50
End 10:00 AM	1.50
Minutes 300	Ave. 1.50

Sample type: Breathing Zone

Location: Bldg 10 2nd FL 3100 Airport Way S. Seattle WA 98134

Activity: Removal

Worker: Melanie Blea

514805335

2003019950A

Comments:

Liters Pump ID
450

LOQ fibers/cc
min 0.086 max 1.112

Fibers/flds
0 / 100

Fibers/mm²
<7.0

RL f/cc
0.006

Fibers/cc
<0.006

Blank ave. (f/mm²) 0.0

Micro. field area (mm²) 0.00785

Effe. filtration area (mm²) 385

Precision +/- 16% Accuracy +/- 10%

Sampled by: Client

Analyzed by: John Caparimo

Reviewed by: Nick Ly

Date Analyzed: 12/13/2005

Date Issued: 12/15/2005

Nick Ly, Technical Director

* Samples are analyzed in accordance with the NIOSH 7400 (Issue 2: 15 August 1994). If the samples were not collected by NVL Laboratories, then the accuracy of the results is limited by the methodology and acuity of the sample collector. The LOQ, Limits of Quantification, are the fiber concentrations, for the given volume of the sampled air, above and below which the results may be unreliable. The RL, Reporting Limit defined in Method 7400 as LOD, is the fibers/cc below which the results may not be confidently distinguished from background levels. This report relates only to the items tested. It shall not be reproduced, except in full, without written approval of NVL Laboratories, Inc.

NVL Laboratories, Inc.

4708 Aurora Ave. N., Seattle, WA 98103
Tel: 206.547.0100, Fax: 206.634.1936
www.nvllabs.com

AIHA - IH
#101861

**Asbestos And Other Fibers Analysis**

by Phase Contrast Microscopy

Client: Ethan Construction
Address: 3100 Airport Way S.
Seattle, WA 98134

Attention: Mr. Elan Hazer

Project Location: Bldg 10 2nd FL 3100 Airport Way S. Seattle WA 98134

Batch #: 2517977.00

Method: NIOSH 7400

Client Project #: N/A

Samples Received: 5

Samples Analyzed: 5

Lab ID: 25107133

Client's Sample #: EC-5

Date sampled: 12/12/2005

Time	Flow Rate
Start 11:00 AM	10.00
End 01:00 PM	10.00
Minutes 120	Ave. 10.00

Sample type: Clearance

Location: Bldg 10 2nd FL 3100 Airport Way S. Seattle WA 98134

Activity: Clearance

Worker:

Comments:

Liters
1200

Pump ID

LOQ fibers/cc
min 0.032 max 0.417

Fibers/flds
0 / 100

Fibers/mm²
<7.0

RL f/cc
0.002

**Fibers/cc
<0.002**

Blank ave. (f/mm²) 0.0

Micro. field area (mm²) 0.00785

Effe. filtration area (mm²) 385

Precision +/-16% Accuracy +/- 10%

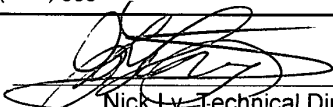
Sampled by: Client

Analyzed by: John Caparimo

Reviewed by: Nick Ly

Date Analyzed: 12/13/2005

Date Issued: 12/15/2005


Nick Ly, Technical Director

* Samples are analyzed in accordance with the NIOSH 7400 (Issue 2: 15 August 1994). If the samples were not collected by NVL Laboratories, then the accuracy of the results is limited by the methodology and acuity of the sample collector. The LOQ, Limits of Quantification, are the fiber concentrations, for the given volume of the sampled air, above and below which the results may be unreliable. The RL, Reporting Limit defined in Method 7400 as LOD, is the fibers/cc below which the results may not be confidently distinguished from background levels. This report relates only to the items tested. It shall not be reproduced, except in full, without written approval of NVL Laboratories, Inc.

NVL Laboratories, Inc.

4708 Aurora Ave N, Seattle, WA 98103
Tel: 206.547.0100 Emerg. Pager: 206.344.1878
Fax: 206.634.1936 1.888.NVL.LABS (685.5227)

CHAIN of CUSTODY SAMPLE LOG

BATCH ID
2517977.00

Client ETHAN CONSTRUCTION

NVL Batch Number

Street 3100 AIRPORT WAY S.

Client Job Number

SEATTLE WA 98134

Total Samples

Project Manager ELAN HAZEL

Turn Around Time ☐ 1-Hr ☐ 24-Hrs ☐ 4 Days
☐ 2-Hrs ☐ 2 Days ☐ 5 Days
☒ 4-Hrs ☐ 3 Days ☐ 6 to 10 Days

Project Location Bldg. 10 2nd FL. 3100 AIRPORTWAY S.

SEATTLE, WA 98134

Please call for TAT less than 24 Hrs

Email address hrodriguez@pdge.com

Phone: (206) 575-9773

Fax: (206) 575-1193

(425) 766-5207

<input checked="" type="checkbox"/> Asbestos Air	<input checked="" type="checkbox"/> PCM (NIOSH 7400)	<input type="checkbox"/> TEM (NIOSH 7402)	<input type="checkbox"/> TEM (AHERA)	<input type="checkbox"/> TEM (EPA Level II)	<input type="checkbox"/> Other
<input type="checkbox"/> Asbestos Bulk	<input type="checkbox"/> PLM (EPA/600/R-93/116)	<input type="checkbox"/> PLM (EPA Point Count)	<input type="checkbox"/> PLM (EPA Gravimetry)	<input type="checkbox"/> TEM Bulk	
<input type="checkbox"/> Mold/Fungus	<input type="checkbox"/> Mold Air	<input type="checkbox"/> Mold Bulk	<input type="checkbox"/> Rotometer Calibration		
METALS	Inst/Det Limit	Matrix	RCRA Metals	<input type="checkbox"/> All 8	Other Metals
<input type="checkbox"/> Total Metals	<input type="checkbox"/> FAA (ppm)	<input type="checkbox"/> Air Filter	<input type="checkbox"/> Arsenic (As)	<input type="checkbox"/> Mercury (Hg)	<input type="checkbox"/> All 3
<input type="checkbox"/> TCLP	<input type="checkbox"/> ICP (ppm)	<input type="checkbox"/> Drinking water	<input type="checkbox"/> Barium (Ba)	<input type="checkbox"/> Selenium (Se)	<input type="checkbox"/> Copper (Cu)
	<input type="checkbox"/> GFAA (ppb)	<input type="checkbox"/> Dust/wipe (Area)	<input type="checkbox"/> Cadmium (Cd)	<input type="checkbox"/> Silver (Ag)	<input type="checkbox"/> Nickel (Ni)
		<input type="checkbox"/> Soil	<input type="checkbox"/> Chromium (Cr)		<input type="checkbox"/> Zinc (Zn)
		<input type="checkbox"/> Paint Chips in %	<input type="checkbox"/> Lead (Pb)		
<input type="checkbox"/> Other Types of Analysis	<input type="checkbox"/> Fiberglass	<input type="checkbox"/> Nuisance Dust	<input type="checkbox"/> Other (Specify) _____		
	<input type="checkbox"/> Silica	<input type="checkbox"/> Respirable Dust			

Condition of Package: ☐ Good ☐ Damaged (no spillage) ☐ Severe damage (spillage)

Seq. #	Lab ID	Client Sample Number	Comments (e.g Sample are, Sample Volume, etc)	A/R
1		EC-1	Building 10 2 nd FLOOR PIC	
2		EC-2	Building 10 2 nd FLOOR AREA	
3		EC-3	Building 10 2 nd FLOOR STEEL	
4		EC-4	Building 10 2 nd FLOOR TWA	
5		EC-5	Building 10 2 nd FLOOR Clearance	
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

Print Below	Sign Below	Company	Date	Time
Sampled by <u>M. Blea</u>	<u>M. Blea</u>		12-13-05	1 AM
Relinquished by <u>M. Blea</u>	<u>M. Blea</u>		12-13-05	6 AM
Received by <u>SCAPARINO</u>	<u>SC</u>	NVL	12/13	7 AM
Analyzed by			12/13	9 AM
Results Called by				
Results Faxed by				

Special Instructions: Unless requested in writing, all samples will be disposed of two (2) weeks after analysis.

NO FAX !!!

NVL Laboratories, Inc.
4708 Aurora Ave. N., Seattle, WA 98103
Tel: 206.634.1879, Fax: 206.634.1936
Emergency Pager #: 344.1878

BATCH ID
2517977.00

NVL Batch # _____
Client Proj. # _____

Client: ETHAN CONSTRUCTION Date: 12-12-05 Project Location: Bldg. 10 3100 Airport Way S. Sea
Sampled by: Melanie Blea of ETHAN CONSTRUCTION Regular 5
Delivered by: Melanie Blea 12-13-05 (Company) Rush 0
Received by: _____ Total Samples 5
Analyzed by: SCAPANO 12/13 Blank Count = 0
Method: NIOSH 7400 Microscope field area: 0.006 Blank cassettes: 0

Sample ID: <u>EC-1</u>	Location: <u>MIDDLE OF 2ND FLOOR IN BUILDING #10</u>	
Sample Type: <u>P</u>	Activities: <u>Pre-Sample</u>	
Protection: _____	Worker: _____	SS#: _____
Decon: _____	Cert#: _____	
Environment: _____	Time: Start <u>4:00</u> Rate: Start <u>15</u>	Fibers
Pump #: <u>2</u>	End <u>4:30</u> End <u>15</u>	/fields
Date: <u>12-12-05</u>	Minutes = <u>30</u> Average = <u>15</u>	Liters <u>450</u>
		LOD <u>.006</u>
		Fibers/cc <u>111</u>

Sample ID: <u>EC-2</u>	Location: <u>2ND FLOOR IN BUILDING #10</u>	
Sample Type: <u>A</u>	Activities: <u>Removal of pipe lagging using The Glove Bag Method</u>	
Protection: <u>M</u>	Worker: <u>Melanie Blea</u>	SS#: _____
Decon: <u>D, S</u>	Cert#: _____	
Environment: <u>H, G</u>	Time: Start <u>4:30</u> Rate: Start <u>10</u>	Fibers
Pump #: <u>2</u>	End <u>10:30</u> End <u>10</u>	/fields
Date: <u>12-12-05</u>	Minutes = <u>360</u> Average = <u>10</u>	Liters <u>9600</u>
		LOD <u>.001</u>
		Fibers/cc <u><.001</u>

Sample ID: <u>EC-3</u>	Location: <u>2ND FLOOR IN BUILDING #10</u>	
Sample Type: <u>C</u>	Activities: <u>Removal of pipe lagging using The Glove Bag Method</u>	
Protection: <u>M</u>	Worker: <u>Melanie Blea</u>	SS#: _____
Decon: <u>D, S</u>	Cert#: _____	
Environment: <u>H, G</u>	Time: Start <u>4:30</u> Rate: Start <u>2</u>	Fibers
Pump #: <u>11</u>	End <u>5:00</u> End <u>2</u>	/fields
Date: <u>12-12-05</u>	Minutes = <u>30</u> Average = <u>2</u>	Liters <u>60</u>
		LOD <u>.045</u>
		Fibers/cc <u><.045</u>

Sample ID: <u>EC-4</u>	Location: <u>2ND FLOOR IN Bldg. #10</u>	
Sample Type: <u>B</u>	Activities: <u>Removal of pipe lagging using The Glove Bag Method</u>	
Protection: <u>M</u>	Worker: <u>Melanie Blea</u>	SS#: _____
Decon: <u>D, S</u>	Cert#: _____	
Environment: <u>H, G</u>	Time: Start <u>5:00</u> Rate: Start <u>1.5</u>	Fibers
Pump #: <u>11</u>	End <u>10:00</u> End <u>1.5</u>	/fields
Date: <u>12-12-05</u>	Minutes = <u>300</u> Average = <u>1.5</u>	Liters <u>450</u>
		LOD <u>.006</u>
		Fibers/cc <u><.006</u>

SAMPLE TYPES

P Pre abatement X Aggressive clearance
A Area FB Field blank
I Inside reg. area TB Trip blank
O Outside reg. area B Breathing zone (TWA)
H HEPA exhaust C Ceiling (STEL)
CL Clearance

CONTROLS

RESP. PROT. DECON. ENVIRONMENT
PA Pressure dem. air D, S Decon. w/ shower H. HEPA vac.
CA Continuous flow air D Decon. w/o shower N. Negative air
PAPR G Glovebag
F Full face mask APR O Outside
M Half face mask APR
PAGE 0 OF 0

NL 12/15/05

RCLLC 0002160

NVL Laboratories, Inc.
 4708 Aurora Ave. N., Seattle, WA 98103
 Tel: 206.634.1879, Fax: 206.634.1936
 Emergency Pager #: 344.1878

BATCH ID
2517977.00

NVL Batch # _____
 Client Proj. # _____

Client: ETHAN CONSTRUCTION Date: 12-12-05 Project Location: Bldg. 10 3100 AIRPORT WAY S. SEA.
 Sampled by: Melanie Bleu of ETHAN CONSTRUCTION. Regular 5
 Delivered by: Melanie Bleu 12-13-05 (Company) Rush 0
 Received by: _____ Total Samples 5
 Analyzed by: JCapano 12/13 Blank Blank cassettes: 0 Count = 0
 Method: NIOSH 7400 Microscope field area: 0085

Sample ID: <u>EC-5</u>	Location: <u>MIDDLE of 2nd FLOOR in Building #10</u>						
Sample Type: <u>CL</u>	Activities: <u>Clearance</u>						
Protection: _____	Worker: _____	SS#: _____	Cert#: _____				
Decon: _____	Time: Start <u>11:00</u>	Rate: Start <u>10</u>	Fibers	Fibers			
Environment: _____	End <u>1:00</u>	End <u>10</u>	/fields	/cc			
Pump #: <u>2</u>	Minutes = <u>120</u>	Average = <u>10</u>	Liters <u>1200</u>	LOD <u>0.002</u>	<u>0.002</u>		
Date: <u>12-12-05</u>							

Sample ID: _____	Location: _____						
Sample Type: _____	Activities: _____						
Protection: _____	Worker: _____	SS#: _____	Cert#: _____				
Decon: _____	Time: Start _____	Rate: Start _____	Fibers	Fibers			
Environment: _____	End _____	End _____	/fields	/cc			
Pump #: _____	Minutes = _____	Average = _____	Liters _____	LOD _____	_____		
Date: _____							

Sample ID: _____	Location: _____						
Sample Type: _____	Activities: _____						
Protection: _____	Worker: _____	SS#: _____	Cert#: _____				
Decon: _____	Time: Start _____	Rate: Start _____	Fibers	Fibers			
Environment: _____	End _____	End _____	/fields	/cc			
Pump #: _____	Minutes = _____	Average = _____	Liters _____	LOD _____	_____		
Date: _____							

Sample ID: _____	Location: _____						
Sample Type: _____	Activities: _____						
Protection: _____	Worker: _____	SS#: _____	Cert#: _____				
Decon: _____	Time: Start _____	Rate: Start _____	Fibers	Fibers			
Environment: _____	End _____	End _____	/fields	/cc			
Pump #: _____	Minutes = _____	Average = _____	Liters _____	LOD _____	_____		
Date: _____							

SAMPLE TYPES

P Pre abatement X Aggressive clearance
 A Area FB Field blank
 I Inside reg. area TB Trip blank
 O Outside reg. area B Breathing zone (TWA)
 H HEPA exhaust C Ceiling (STEL)
 CL Clearance

CONTROLS

RESP. PROT.	DECON.	ENVIRONMENT
PA Pressure dem. air	D,S Decon. w/ shower	H HEPA vac.
CA Continuous flow air	D Decon. w/o shower	N Negative air
PAPR		G Glovebag
F Full face mask APR		O Outside
M Half face mask APR		PAGE OF